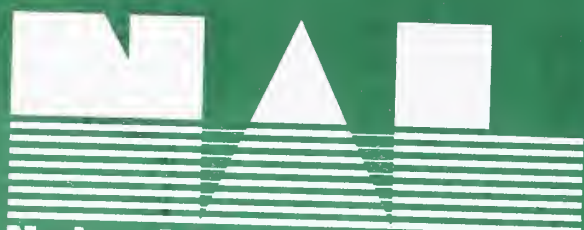


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Seasonal Fluctuations in Maine Timber Industry Employment

Division of Cooperative Forest Management

2000 - 2001

SEASONAL FLUCTUATIONS
IN
MAINE TIMBER INDUSTRY EMPLOYMENT

August 1969

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Seasonal Fluctuations in Maine Timber Industry Employment

Seasonal employment in timber manufacturing firms has long been a problem for both labor and management. The logging segment of the lumber and wood product firms has the greatest deviations in monthly employment, largely because of weather conditions over a year's period, but partly because of traditional work periods carried over from the agricultural era of resource development (the 1800's).

Primary processors of log products have seasonal fluctuations of lesser degrees. Their labor fluctuations are influenced by the seasonality of logging operations.

Data on monthly employment deviations from the annual average employment from 1958 to 1967 are presented in this report. All data were supplied by the U.S. Dept. of Labor, which, in turn, obtains the data from the Maine Department of Labor. An attempt has been made to show trends in the period. Trend analyses were prepared by 5 year periods as well. In some industries, significant changes in employment patterns seem to have occurred during the 10 years. In these industries, average monthly and annual employment data are shown as 5-year averages. Where no changes other than increases or decreases in average annual employment have occurred average data for the 10 year period are shown.

Logging Employment

Average annual employment in the 1958-62 period was 5583 people (mostly men). In the 1963-67 period, average annual employment dropped to 5224, a decrease of 6.4%.

Actual average annual employment in the first 5 years ranged from a low of 5064 to a high of 6322, a difference of 25%. In the second 5 year period, the range was from a low of 4465 to a high of 5125, a difference of 15%.



This lower variation in the 1963-67 period meant greater stability in employment for those employed. However, the change in monthly employment was even more significant from the standpoint of income stability for loggers. The monthly employment changes in the 2 periods are shown most clearly in the graphs.

Average monthly employment in the 1958-62 period peaked in June, July and August. In June and July it averaged over 30% higher than annual average employment, and in August, over 20% higher. The months with lowest employment were March, April and May; April was the worst month, the deviation being over 55% below the annual average.

In this period, employment varied from the annual average in the 3 months of April - June from -55% to +31, a total difference between the low and high of 86%. With the shortage of logging labor reported near the end of the period, employers must have been faced with many operational and recruitment problems.

Average monthly employment in the 1963-67 period peaked in December, when it was 19% above the annual average for the period. It reached a low point, again in April, when it was 45% below the annual average. However, monthly employment for 7 months, from June thru December, was much more stable than it was in the first 5 year period, varying from about 7.5% above the annual average to 19% above. For the same 7 months of the 1958-63 period, employment varied from 5% to 31% above the annual average.

Although employment during the year was much more stable in the second 5 year period, the 3 months of March to May again showed the

lowest employment figures. Weather and ground conditions would appear to be the chief factors involved. However, it is obvious the 3 month period still represents an unsolvable problem in labor employment and retention.

In real numbers, average monthly employment in the 3 low months was about 3500 in 1958-62 and 3300 in 1963-67. Average monthly employment in the 7 high months of June to December was about 6500 and 5600 respectively. It meant that 3000 fewer men were employed in the 1958-62 3-month low period, as compared to the 7-month high period, and 2300 fewer in the 1963-67 period. The 3 month unemployment period for these numbers of loggers would certainly cause hardships for family heads.

In summary there apparently has been an almost revolutionary change in logging operations and employment patterns during the 10-year period 1958 to '67. The change has resulted in much more stability in employment for loggers over 3/4 of the year and, undoubtedly, greater career possibilities will result from this change. However, despite these great changes, almost half of the average annual work force have continued to be unemployed for the 3 Spring months of March - April - May.

Employment in Sawmills, Planing, Dimension, Flooring and Special Products

Sawmills

Employment in sawmills is more uniform throughout the year than it is for logging. In general, however, there has been only a small change in the average monthly employment patterns between the 5-year periods of 1958-62 and 1963-67.

The peak season for sawmill employment was the same for both 5-year periods, June - August. The low season was the same also, March and April. The

lowest monthly employment in the first period was April, 6% below the annual average, and the highest was June, 11% above. In the 2nd period, the April low was 6%, but June and July had almost equal high figures of 9% above the annual average. Total differences between low and high employment months were 17% and 15% respectively in the 1st and 2nd 5-year periods.

It is possible, indeed likely, that some of the monthly deviations from the annual averages are caused by deviations in employment of logging crews employed by sawmills. If so, it would appear that sawmill logging operations were not changed during the 10 year period. In 1967, owners were operating logging crews much as they did in 1958, i.e., the bulk of the logging was done in June - July- August.

In real numbers, average annual employment in the first 5 years was 2528, and in the second, 2144, a decrease of 15.2%. In the high periods of employment June - July average employment per month was 2766 in the first 5-year period and 2331 in the second. The averages for the March - April lows were 2367 and 2024.

It can be seen that sawmill owners had to recruit 399 men between March - April and June - July in the first period, and 307 in the second. Or, said in another way, 399 and 307 fewer men respectively were employed in March and April than in June and July.

Employment in Millwork Plants, Veneer and Plywood Plants, and Prefabricated Wooden Buildings

Fluctuations in monthly employment in these combined classifications were relatively minor when compared to the logging and sawmill industries. There

was no definite pattern or trend shown in the data for the two 5-year periods.

In the 1958-62 period, the high deviation was in August, 7.4%, and the low was in January, 4.9%. From June through November, deviations were all positive and averaged 3% above the annual average. In real numbers, average employment for the year was 978, with a high of 1050 in August and a low of 930 in January.

In the 1963-67 period, a large plant or plants discontinued operations in 1965, making the monthly average deviations meaningless for a 5-year period. When the data for 1965 were excluded high employment deviations occurred in June and October, and the lows in March and July. Except for July, deviations were all positive April through November.

Average annual employment in the two periods decreased about 21% from 1958 to 1967. However, data for the first half of 1968 shows an employment gain in June (922) nearly to the average for the 1958-62 period. The slump in employment may be ending.

Employment in Wooden Boxes and Container Mills

This group of the timber industry employs people in much the same pattern as the sawmill group. Peak employment periods in both 5-year periods occur from May through September. July and August show the highest employment with deviations of 12% to 13% above the annual average.

Low employment periods occur in 7 of the 12 months. Greatest deviations below the annual average in the first 5-year period occurred in February and March when employment was -11% to -15%. In the second 5-year period, November and December had the greatest negative deviations, about 9%.

Average monthly fluctuations in the 2nd period were less than those in the 1st. Part of this difference may be explained by the drop in numbers of people employed, from an average of 274 in 1958-62, to 162 in 1963-67. Total deviation in the first period (between the low in February and the high in August) was almost 28%. In the 2nd period, total deviation between the low and high (in November and July) was 21%.

As this group's peak employment season occurs at the same time as in larger employment groups, employers would face serious competition for labor. As this group paid the lowest annual wage of all timber industry groups, it would appear as though they should be in a very serious position in regard to labor.

Employment in Wood Products Plants not Elsewhere Classified

This heterogeneous grouping contains next to the largest number of employees in the lumber and wood products classification, almost a third in fact. More important, however, it is the only group in the class that shows an increase in numbers employed; in the 2nd 5-year period, there was an average of 5028 employed, as compared to 4680 in the first period.

Monthly fluctuations in employment are minor in both periods, but are less in the 2nd than the first. In the first, the greatest positive deviation occurred in April, +3.0, and the largest negative deviation, 2.9%, in July. In the second, the largest deviations were -1.9% in January and +1.9% in December.

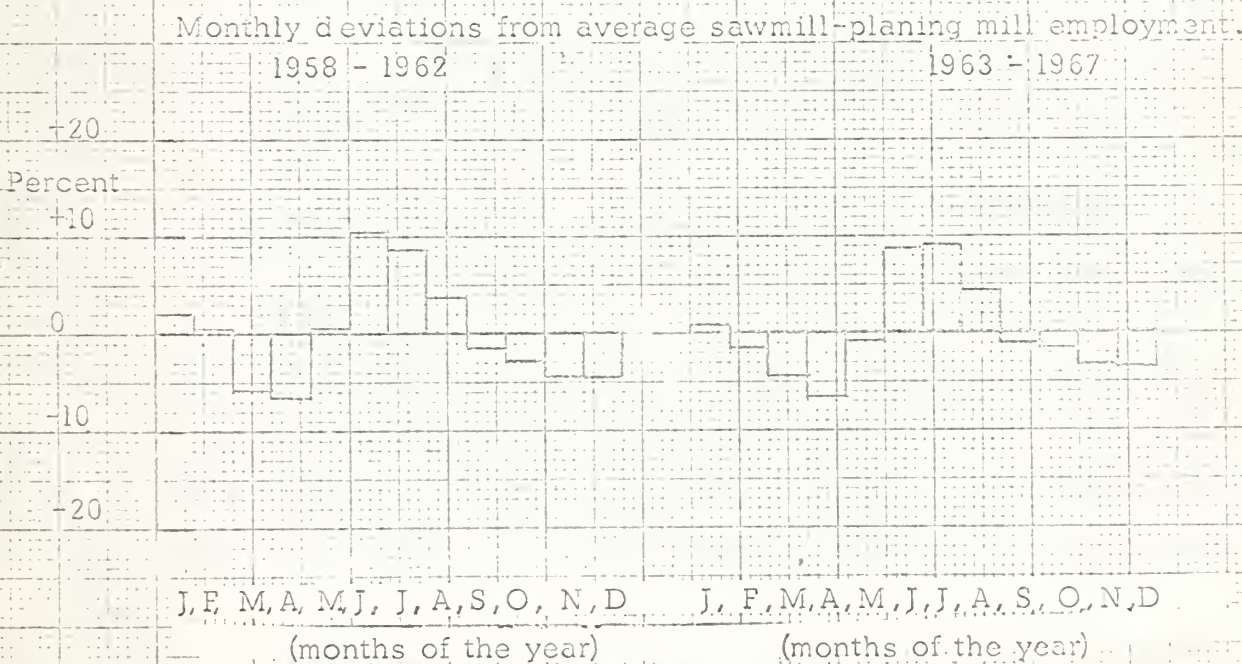
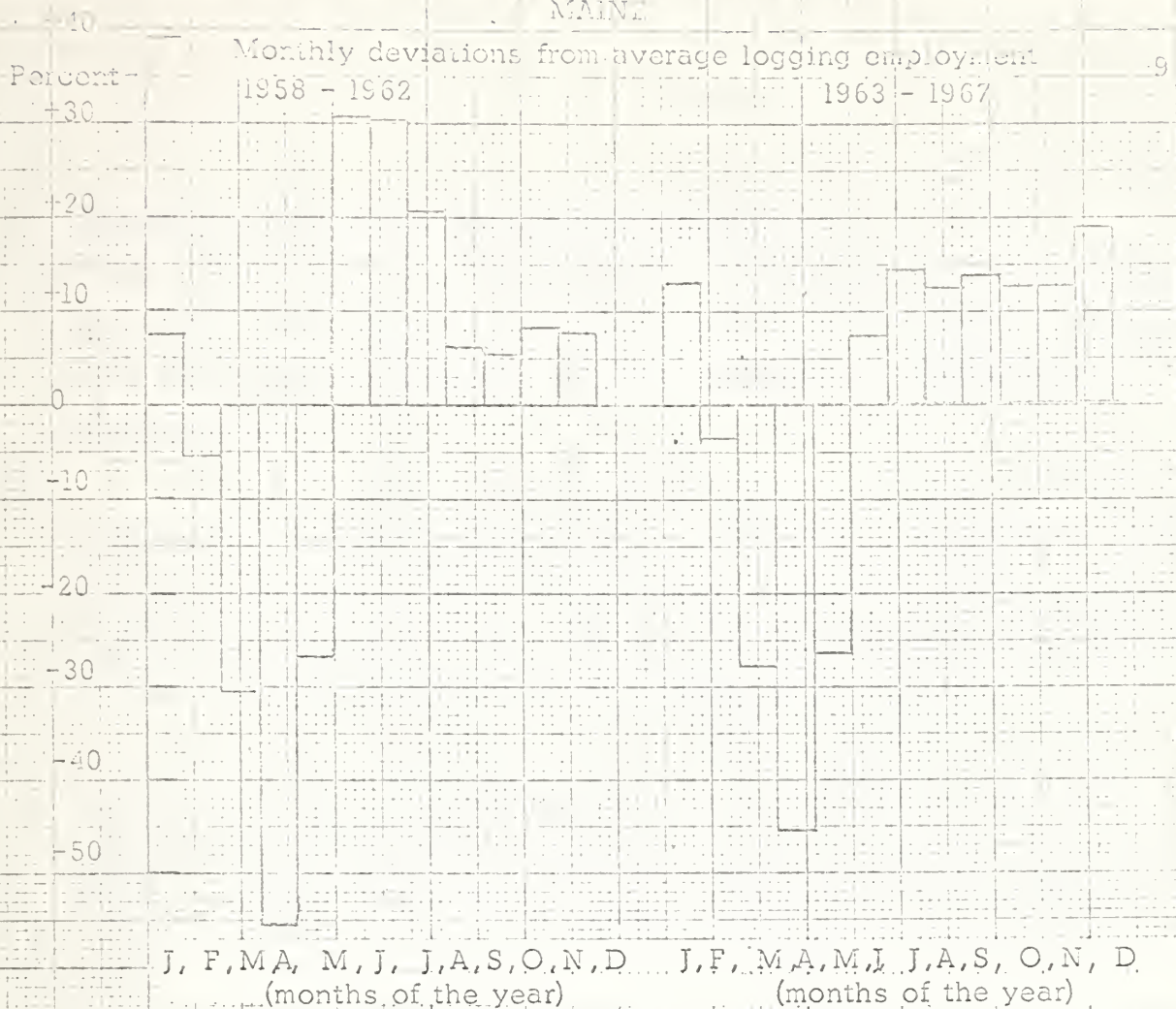
Note that the peak season in employment, (if the minor increase may be called a peak), occurs in the low season for employment in the other groups of the class. Conversely, the off-season for the group appears to be the peak seasonal employment for the other groups.

Only two general inferences can be drawn in regard to employment in this mixed group of industries; employment opportunities are increasing, and monthly fluctuations are minor. Other data shows low annual wages are paid to employees, indicating perhaps that stability in employment may make low wages tolerable, as the group is the only one of the class to increase employment.

Monthly Deviations (in percent) From Average Annual
Employment in Two 5-Year Periods

Industry	5-Year	MONTHS											
		Jan.	Feb.	Mar.	Apr.	May	June	July	August	Sept.	Oct.	Nov.	Dec.
Logging	1958-62	-7.5	-5.4	-30.5	-55.2	-26.9	+30.8	+30.5	+20.8	+6.1	+5.4	+8.6	+7.9
	1963-67	+13.6	-3.3	-27.6	-45.3	-26.3	+7.4	+14.8	+12.8	+14.0	+12.8	+12.8	+19.3
Sawmills	1958-62	+2.1	+0.2	-5.9	-6.8	+0.4	+10.2	+8.7	+3.8	-1.3	-2.8	-4.2	-4.3
	1963-67	+0.9	-1.5	-4.5	-6.5	-0.8	+8.6	+8.8	+4.4	-1.0	-1.5	-3.2	-3.5
Dimension Veneer	1958-62	-4.9	-0.5	-0.6	-2.1	-0.2	+2.7	+1.8	+7.4	+1.5	+2.2	+2.1	-1.2
	1963-67*	-0.3	-0.9	-1.0	+2.4	+0.8	+3.9	-1.9	+1.3	+1.1	+3.8	+1.0	-0.5
Wood Containers	1958-62	-8.4	-14.6	-10.9	-1.5	+4.7	+11.7	+12.4	+13.1	+10.6	-1.5	-8.0	-8.8
	1963-67	-1.9	-2.5	-7.4	+1.2	+1.2	+3.7	+11.7	+10.5	+4.9	-6.2	-9.3	-8.6
Miscell. Wood Products	1958-62	0	+1.3	+1.8	+3.0	+1.4	+0.4	-2.9	-0.8	-0.9	-0.8	-1.3	-1.2
	1963-67	-1.9	-1.3	-0.2	+0.8	+0.2	+1.1	-0.3	+0.3	-0.2	-0.6	+0.2	+1.9

* 4 Year Average; 1965 Data Excluded.



Employment Fluctuations in Wood Furniture Plants

Most of the employment in the Furniture and Fixtures (SIC 25) manufacturing group is in the wood furniture segment (SIC 2511, 12). Of the 1353 average 1967 employment in the group, 899 were employed by wood furniture manufacturers.

Employment in wood furniture plants is quite stable. The greatest monthly fluctuations from the average annual figure for the 1958-62 period were - 2.6% in February to a +1.6% in October. In real numbers, there were only -13 and +8 deviations from the 505 average annual figure.

In the 1963-67 period, excluding the date for 1965, when a new plant or plants started production, the greatest deviations from the average were -4.1% in October and +2.1% in January and February. In real numbers, there were -29 and +15 deviations from the 703 average for the 4 years included.

Total employment increased in the 10 year period from 1958 to 1967. Average annual employment was 469 in 1958 and 899 in 1967.

Employment in Other Furniture and Fixtures Manufacturing Plants

Average annual employment in the public building furniture category (SIC 253) was 317 in 1967. This figure was up over the 10 year period, from 173 in 1958 to 317 in 1967. How much of the employment was in timber-based manufacturing would not be determined from the breakdown of data shown. The analysis of monthly employment data indicate a ± 20 man deviation from the averages, in both 5 year periods. Greatest employment occurs July thru March.

Data on the wood partition category (SIC 254) and furniture and fixtures not elsewhere classified (SIC 259) showed average annual employment in 1967 of 74 and 63 respectively. These 2 categories were combined for analysis purposes. Both are assumed to be timber-based manufacturers.

Monthly deviations for the combined categories were minor, ranging from -2.5% to +6.5% in the 5-year periods studied. In real numbers, deviations were from 3 men below the average number in January-February, and December, to 8 above in July-August. Average annual employment declined slightly; in the 5-year period 1958-62 it was 143, and in 1963-67 it was 125.

Employment Fluctuations in Pulp Mills

During the 1958 to 1967 period, large capital investments in pulp mills reduced both monthly fluctuations and total employment. In the 1958-1962 and 1963-67 periods, deviations from the annual averages were small. There was an average of 904 employed in the first 5-year period and 676 in the second.

Deviations in the first period varied from the high in June of +6.6% to the low in November of -4.8%. In the 1963-67 period, deviations were highest in June, +3.3% and lowest in March and July, -3.0%. In real numbers, deviations were reduced to about ± 20 men.

Employment Fluctuations in Paper Mills

Paper mills employ more people than all other timber-based industries combined. Deviations from the annual average were small percentagewise, but the number of jobs was more significant. There was a small increase in average employment; from the 1958 average of 14,971, employment increased to 16,037 in 1967, or about 7%.

In both 5-year periods, deviations from annual averages for the periods averaged less than $\pm 2\%$. In real numbers, highest deviations ranged from 240 to 280 above and below the averages for the two periods. Highest employment occurred in summer months, lowest in February-March, and again in November.

Employment Fluctuations in Paperboard and Building Paper and Board Mills

These two industry groups were combined because of the relatively small employment in each. Both have very little fluctuations during the year; both had the same average employment in 1967 as in 1958. Deviations in the 5 year periods, excluding one year in which work stoppages occurred, were seldom more than ± 11 , or about 3%.

Employment Fluctuations in Converted Paper Products Plants

Average employment increased 50% in 10-years from 849 in 1958 to 1,273 in 1967. Monthly deviations remained about the same in the 5-year periods of expansion, about $\pm 4.5\%$ or 45 to 50 jobs. The highest employment occurred in December, the lowest in July.

Monthly Fluctuations in Paper Box and Container Industry

Average employment increased 33% in 10 years, from 372 in 1958 to 495 in 1967. Monthly fluctuations during this modest expansion increased slightly to about $\pm 3.3\%$ in the 1963-67 period from $\pm 2.2\%$ in the 1958-62 period. The actual number of jobs affected is small, about ± 13 in 1963-67 as compared to the ± 8 in the first period. The highest employment was in December, the lowest in February.

Summary

Study of monthly fluctuations in employment from the average annual employment figures provide some insight into problems of employers and

employees. Where fluctuations are large, industries showing such an employment pattern may not be considered by employees to have great career potentials. Employers could be faced, as a result, with serious recruitment problems, even in industries paying good hourly or weekly wage rates.

Of the three timber-based broad industry groups, the Lumber and Wood Products group is subject to large monthly deviations in employment. The other two groups, Wood Furniture and Fixtures, and Paper and Allied Products, show only small monthly deviations. Some of the deviation noted in these two latter groups may, in fact, be caused by the employment pattern in the first group.

Data for the period 1958 to 1967 were separated by industries into 5-year periods. Average employment per year and per month in each period were calculated and compared to determine if trends or changes in employment patterns had occurred.

Oral reports of changing employment patterns due to labor difficulties had been received; data substantiated the fact that changes had occurred in the industry with the highest monthly deviations, logging, but little changes were obvious in others.

For the broad Lumber and Wood Product group of industries, the lowest employment occurs in March, April and May, greatest employment in June, July, and August. In the 1958-62 period, April employment averaged 22.2% below average annual employment, or 3,120 jobs. Highest employment occurred in June when it was 14.7% above the annual average, or 2,062 jobs. In a 3 month period, April to June, there was a total swing of 5,182 jobs, which was 37% of average annual employment in the period.

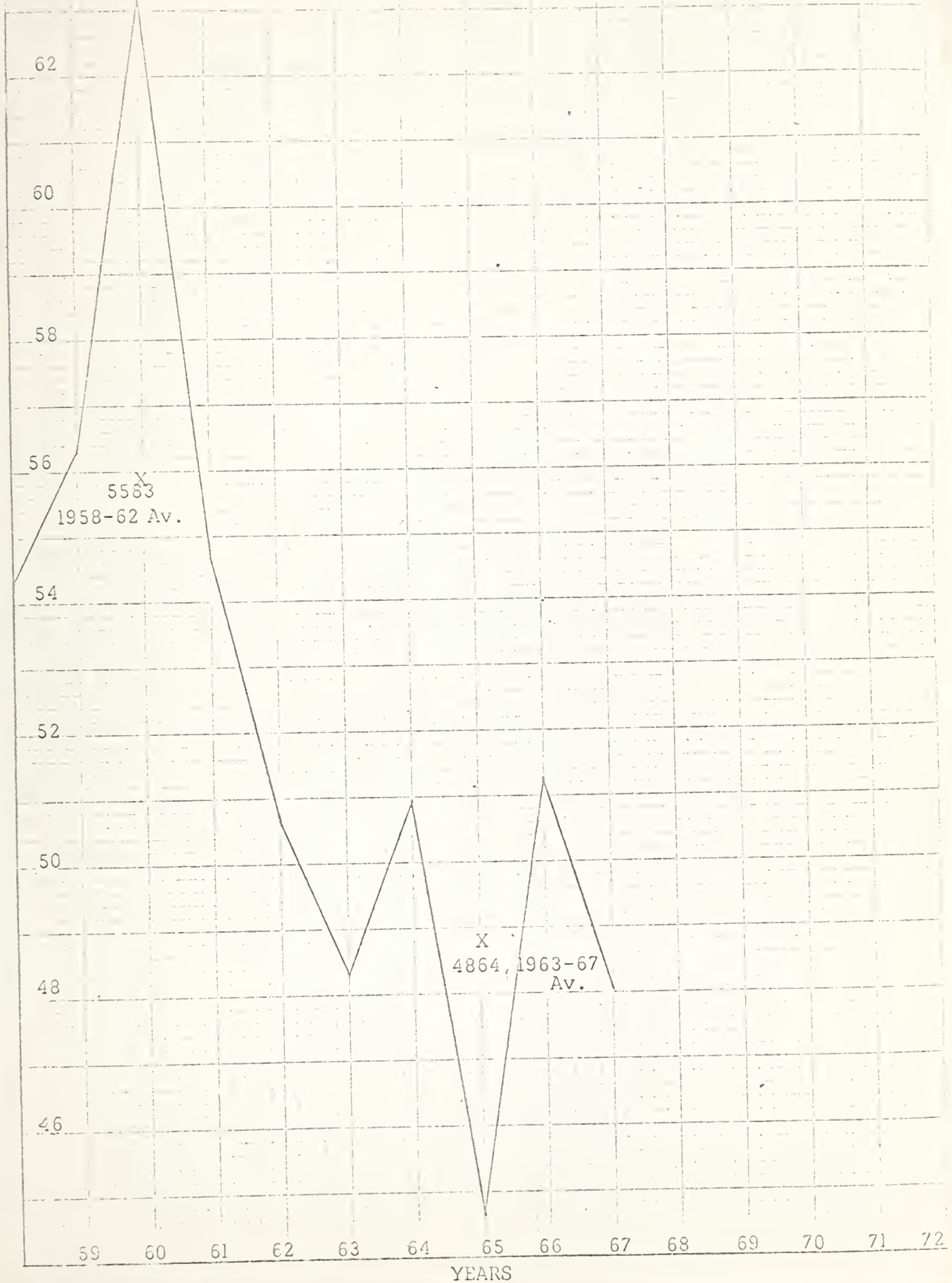
In the 1963-67 period, high and low employment periods were the same. The high monthly average occurred in July rather than June 6.8% or 879 jobs above the average annual figure. The lowest monthly employment occurred again in April, 17.8% or 2,306 jobs below the annual figure. The total swing of 3,185 jobs in the 4 months was 25% of average annual employment in the period.

Wood Furniture and Fixtures industries were subject to work stoppages and perhaps other manufacturing problems during the 10 years. Changes in monthly employment averages in the 5-year periods may have been concealed because of these problems, but little evidence of trends was noted. In the 1958-63 period, high and low monthly employment varied $\pm 4\%$ from the annual average, compared to a deviation in 1963-67 of $\pm 2\%$. In both periods, July and August showed highest average employment; lowest employment occurred in February in the first period, and in April in the second. In general, although deviations were small, involving no more than 45 to 65 jobs, seasonal employment patterns were similar to those shown by the Lumber and Wood Products group.

The Paper and Allied Products group showed the greatest stability in employment, i.e., the least monthly deviation on a percentage basis. The highest monthly deviations in both 5 year periods were in June, averaging $1\frac{3}{4}\%$ or 306 to 325 jobs. The lowest monthly employment was in November and averaged 1.3% in each period, or about 250 jobs. Seasonal employment was similar to that of the Lumber and Wood Products groups, highest in the summer, lowest in late winter and early spring.

Average Annual Employment in Maine
Logging, SIC 241

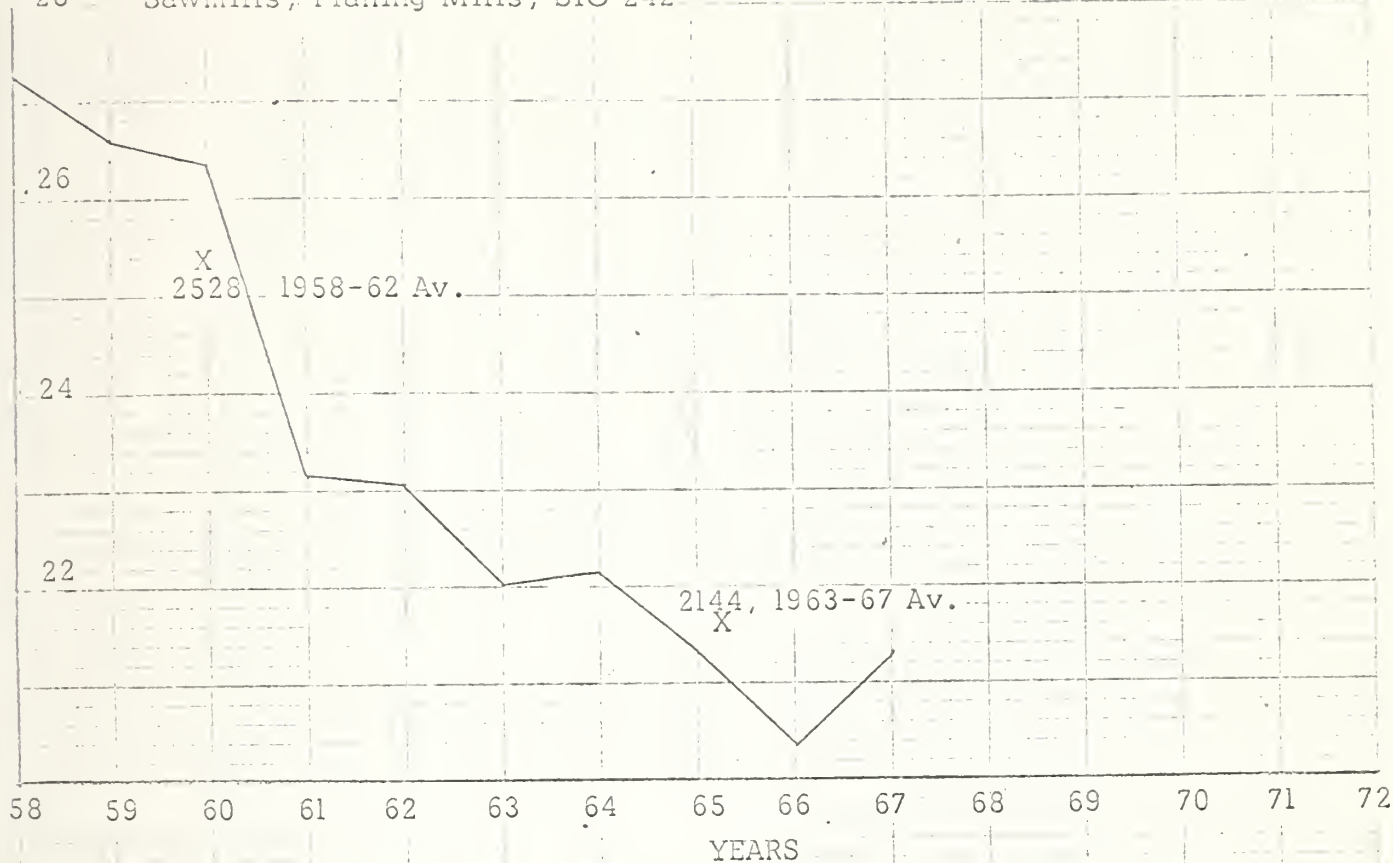
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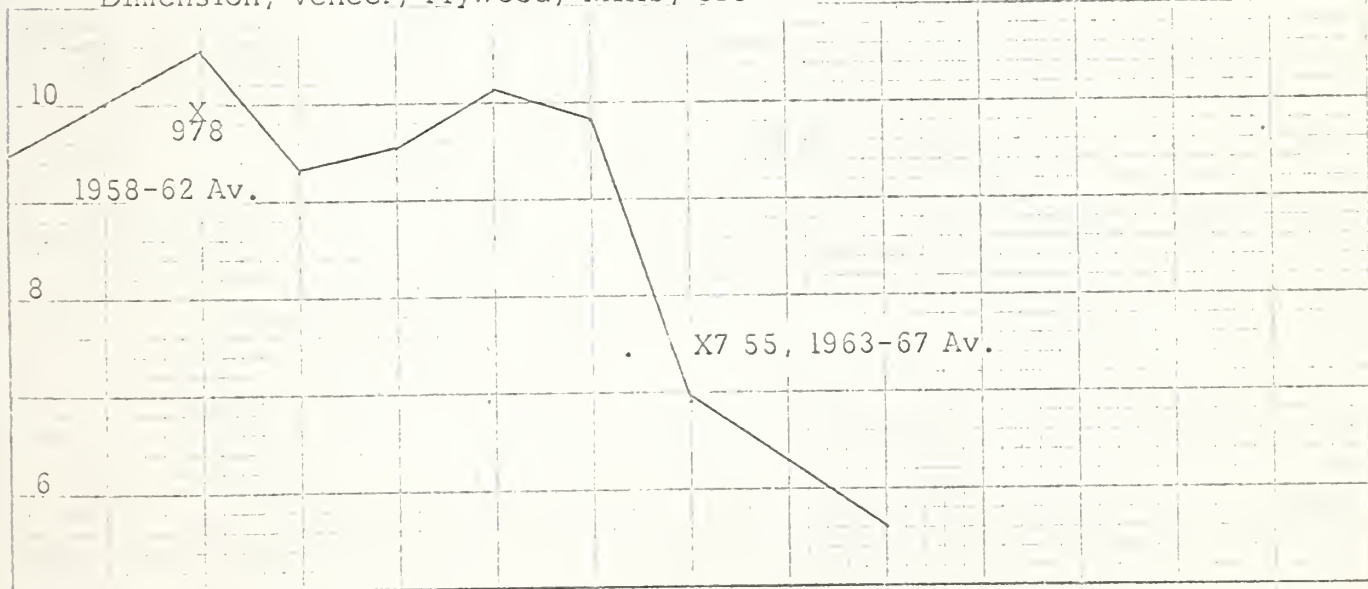
Average Annual Employment in Maine

(Hundreds Scale)

28 Sawmills, Planing Mills, SIC 242

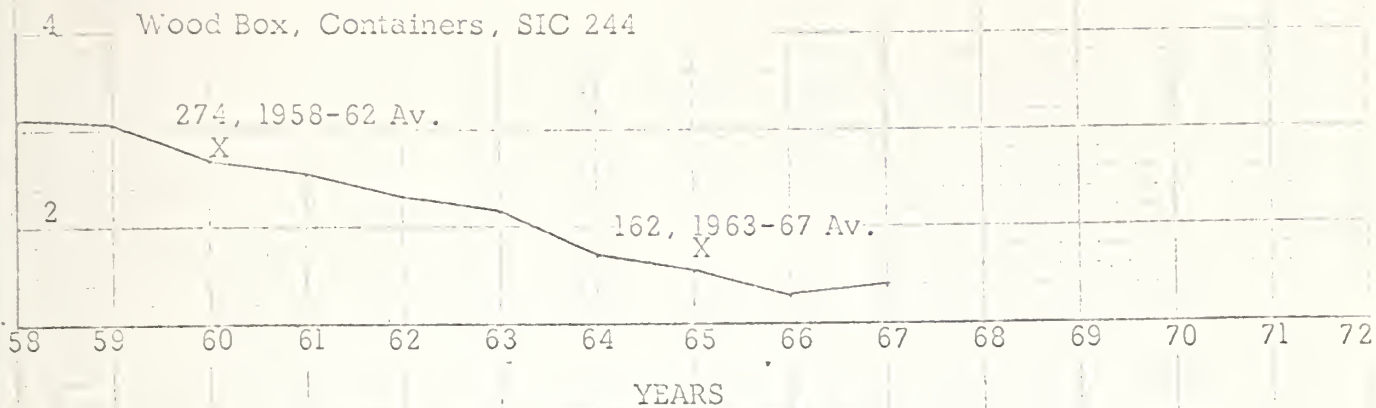


Dimension, Veneer, Plywood, Mills, SIC 243

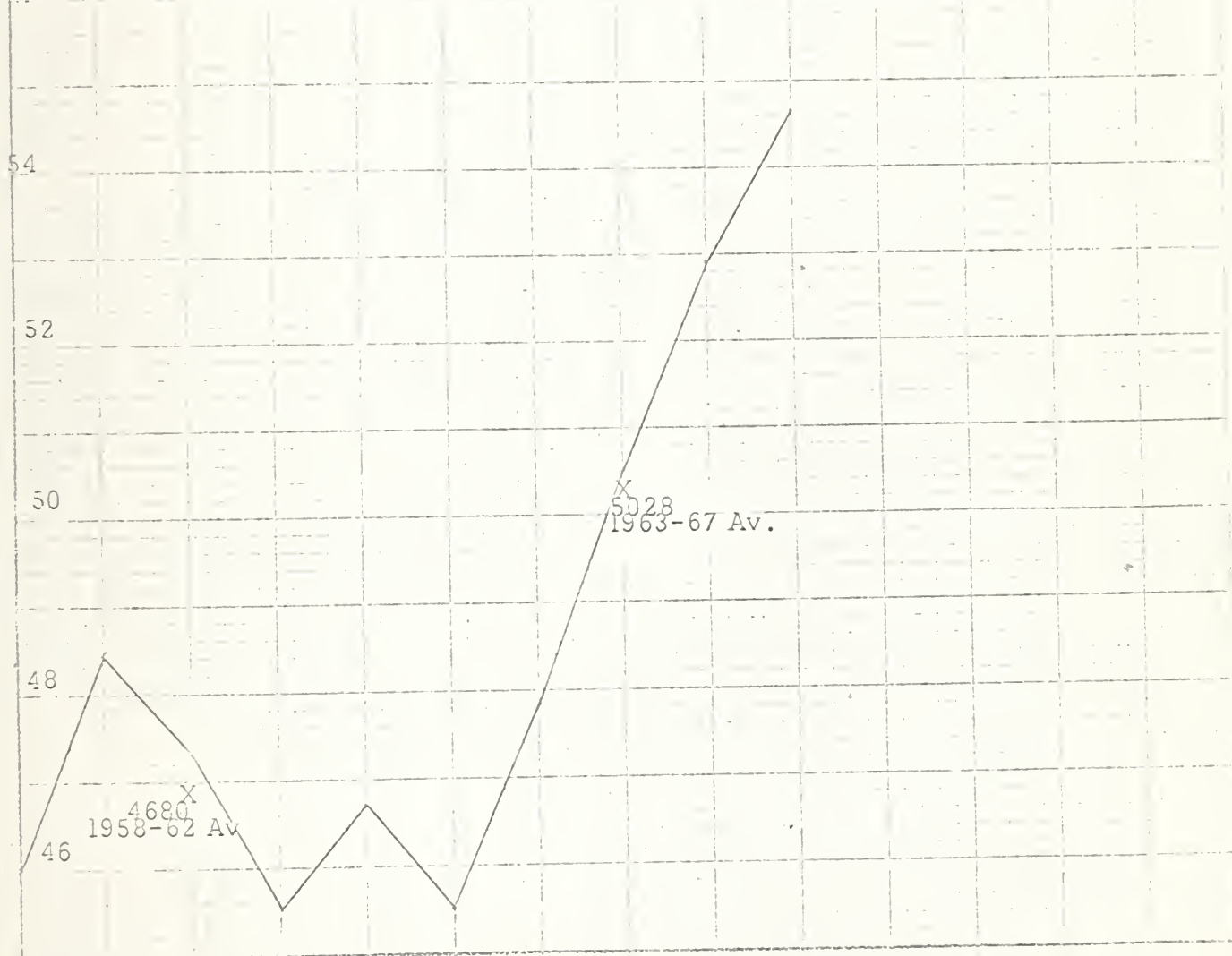


Average Annual Employment in Maine

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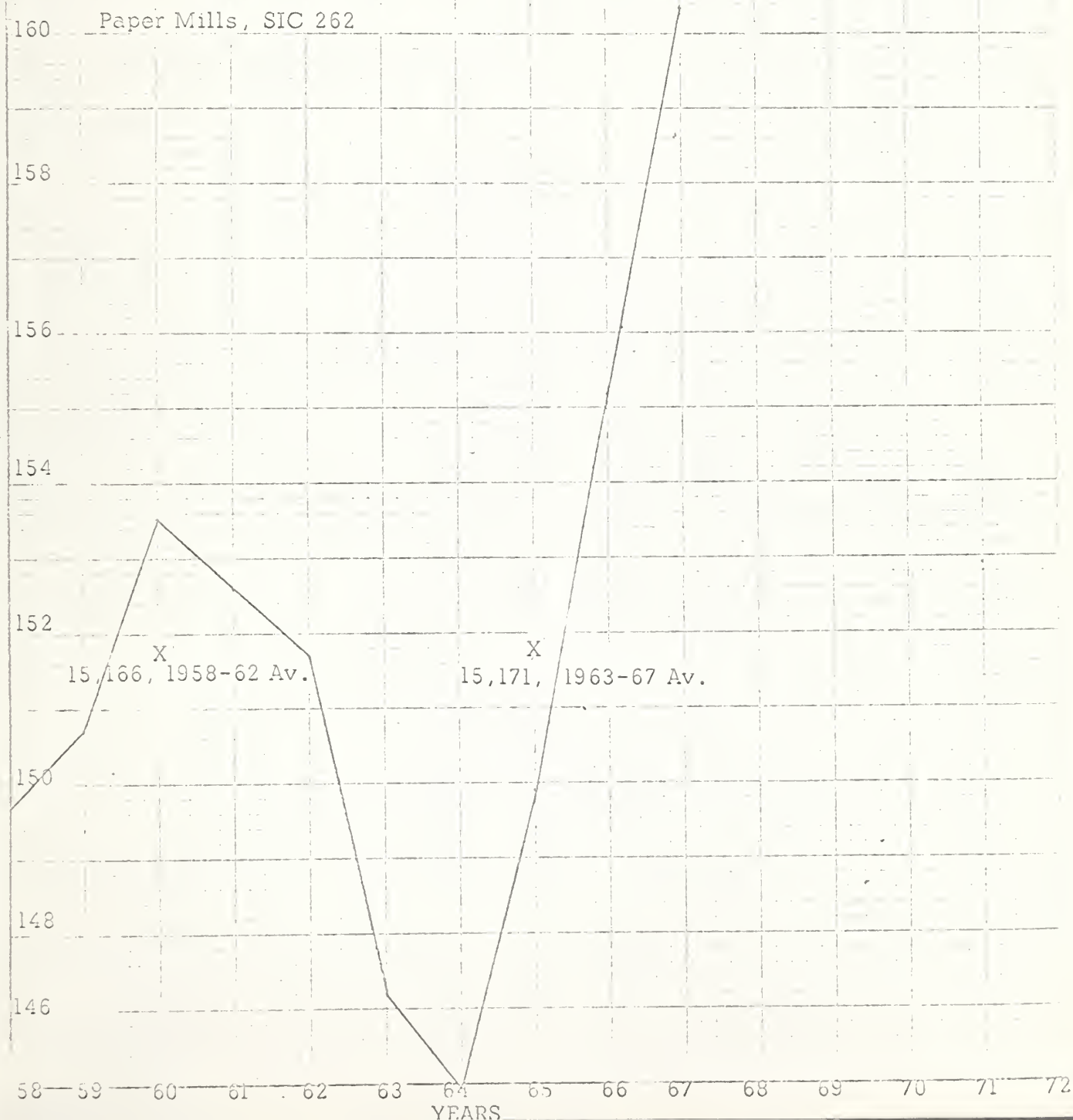
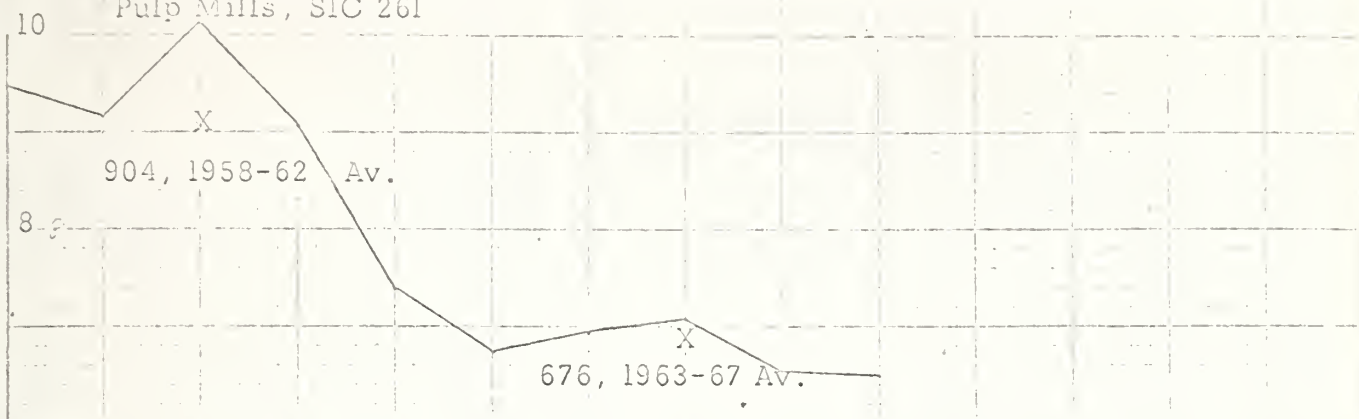


56 Wood Products Not Elsewhere Classified, SIC 249



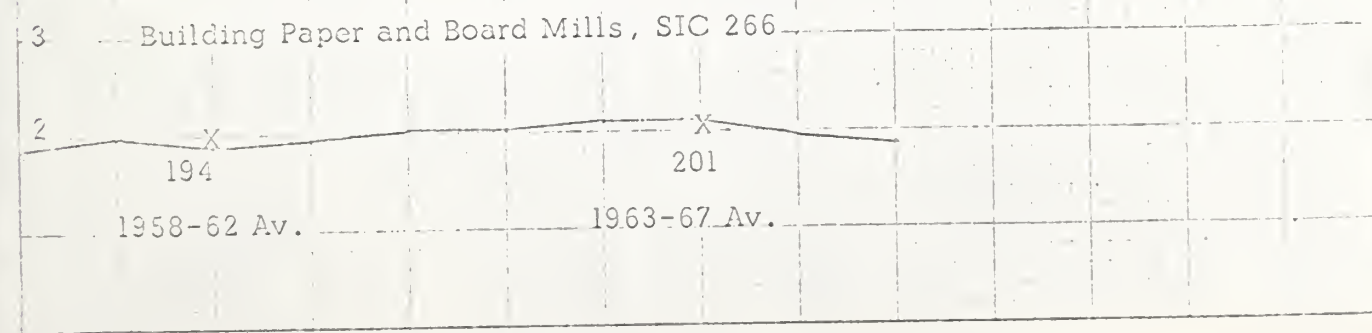
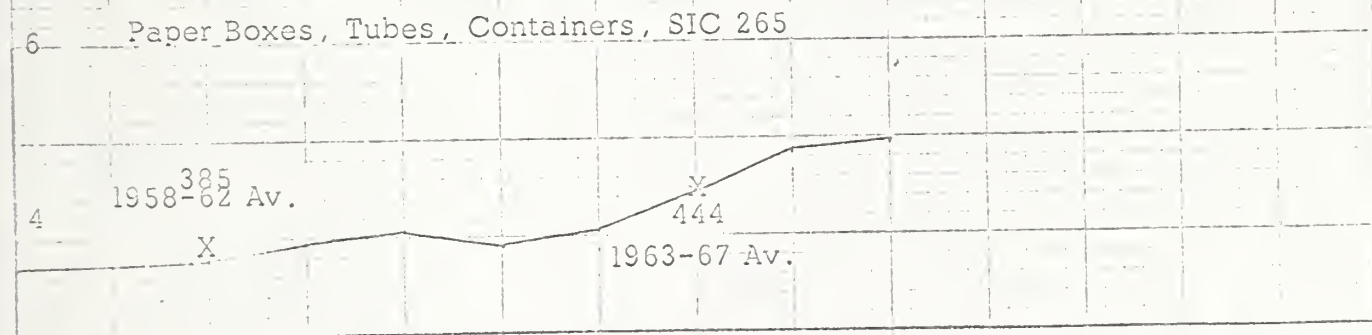
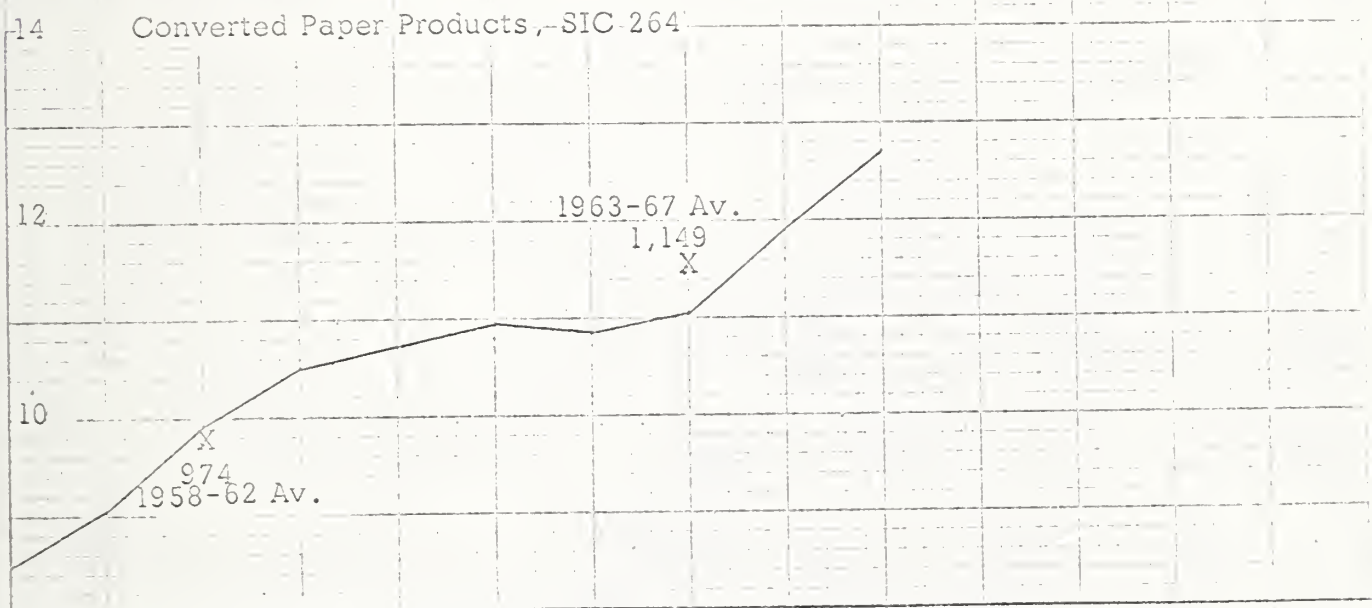
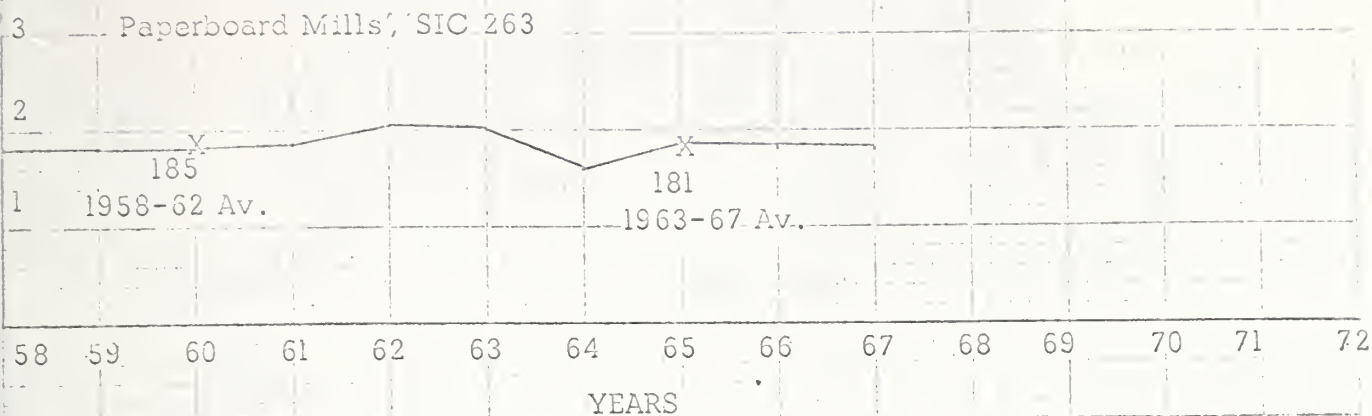
Average Annual Employment in Maine
Pulp Mills, SIC 261

(Hundreds Scale)



Average Annual Employment in Maine

(Hundreds. Scale)



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